



1801 W. Norton, Suite 309A  
Springfield, MO 65803

**Statement of Qualifications for  
Engineering and Design Services  
Bartlett & West  
Proposal No. 2493-25  
Returnable 3:00 p.m. June 25, 2019**

**RECEIVED**

**JUN 25 2019**

BY: 11:45 *ls*



1801 W. Norton, Suite 309A  
Springfield, MO 65803  
ph (888) 200-6464  
[www.bartlettwest.com](http://www.bartlettwest.com)

June 25, 2019

David Rockhill, C.P.M.  
Purchasing Office  
City of Branson  
110 W. Maddux St., Suite 200  
Branson, MO 65616

RE: Request for Proposals – City of Branson Utility Projects  
PN #2493-25

Dear Selection Committee,

You have an important decision to make for the Spring Creek neighborhood and residents served by Lift Station #17. Ultimately, residents look to you to choose the right team for their water and sewer improvements. It is imperative that this project runs smoothly, delivering quality results that are financially sustainable for the long-term.

Elected officials and the residents impacted by these two projects put their trust in you, and we don't take that lightly. That's why we have put together a team of seasoned experts to serve you. You can rely on our vast experience, balanced with continual training that drives innovation and quality.

As you'll see in reviewing our project descriptions and speaking with our references, Bartlett & West clients value our continuous communication, our accountability for adherence to budget and schedule and our innovative approaches to saving money.

We value the City of Branson and the State of Missouri. We have five offices across the state, including Springfield, Missouri. We invite you to review the enclosed qualifications and contact our references, all of which highlight the value we have brought to existing clients and the value we will bring to your city. Thank you for your time and consideration, and please don't hesitate to contact us with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Steve Schultz'.

Steve Schultz, P.E.  
Client Liaison  
[steve.schultz@bartwest.com](mailto:steve.schultz@bartwest.com)

A handwritten signature in black ink, appearing to read 'Gary W. Davis'.

Gary Davis, P.E.  
Project Manager  
[gary.davis@bartwest.com](mailto:gary.davis@bartwest.com)



Driving community and industry forward, together.



# PROJECT UNDERSTANDING AND APPROACH

We understand the City of Branson is planning three utility projects within the City's system near the Spring Creek neighborhood. This plan includes a sewer force main replacement for Lift Station #17 (LS 17), as well as a water distribution system replacement and sewer collection system replacement for the Spring Creek neighborhood.

The City has experienced failures with the existing 12-inch PVC force main at LS 17 due to numerous line breaks and is seeking to replace this with a ductile iron main for future system demands and reliability.

This project also requires the existing system to remain in service during the new construction and tie-over. Critical to this project will be the route selection of the new force main to provide the best value and long-term reliability considering topography, air release needs and land acquisition costs.

The City seeks to improve the existing drinking water distribution system of the Spring Creek neighborhood to improve residential flows as well as provide fire flow to existing and future annexed customers. The system improvements will need to provide redundancy and looping of mains to prevent dead ends and provide system reliability.

The City also seeks to replace and improve the sewer system of the Spring Creek neighborhood. The project includes the replacement of an existing substandard private sewer collection system with a new gravity collection system meeting the City's standards and providing ease of maintenance and accessibility.

## WATER DESIGN STEPS

Our team always begins by evaluating the local existing system, supply and pressures



available. We will review planned developments to the east of the neighborhood to account for future annexed customer needs. This evaluation process always includes interviewing stakeholders such as yourself and listening carefully to your concerns. We will review the existing water model and update it with a proposed design to ensure adequate supply and fire flow for existing and future annexed residential customers to the east. We understand areas to the south of the Spring Creek neighborhood are served by Missouri American Water Company and will not be a future service area for the City.

Ultimately, we will provide a design that meets the demands of Branson's system and topography with redundancy while minimizing critical system components such as PRVs. We will ensure new installations meet all requirements and regulations including City of Branson standards, AWWA, Missouri DNR and IFC hydrant and fire flows for residential and commercial properties as applicable.

## VALUE ENGINEERING

We will provide cost opinion and cost comparison of alternative options at the preliminary phase to develop a reliable system design at the best value, considering installation and long-term maintenance costs.

# PROJECT UNDERSTANDING AND APPROACH

## WATER SYSTEM CONSIDERATIONS

Other considerations may include dual flow PRV stations that meet zone metering needs and allow for low flow and fire flows without premature valve wear. We designed this exact station for PWSD No. 4 of Cole County. The PRV station has two PRVs (high and low flows) and two mag meters for zone metering. This unit was installed in 2018. Please call Will Humphrey with Cole No. 4 for a reference on our performance.

## FORCE MAIN CONSIDERATIONS

We will ensure system curve and sizing of the new main is adequate for build-out of the service area. We will provide recommendations for new pump upgrades or configurations to fit current and future flow requirements. We will provide an alignment that minimizes or eliminates local high points to avoid air release valves, if possible. In Jamestown, Missouri, we designed

the installation of a deeper force main, at the request of the City, to avoid the need for an air release valve. This decision is based on the tradeoff between accessibility of the deeper force main versus the maintenance of the air release valve and possible odor control considerations.

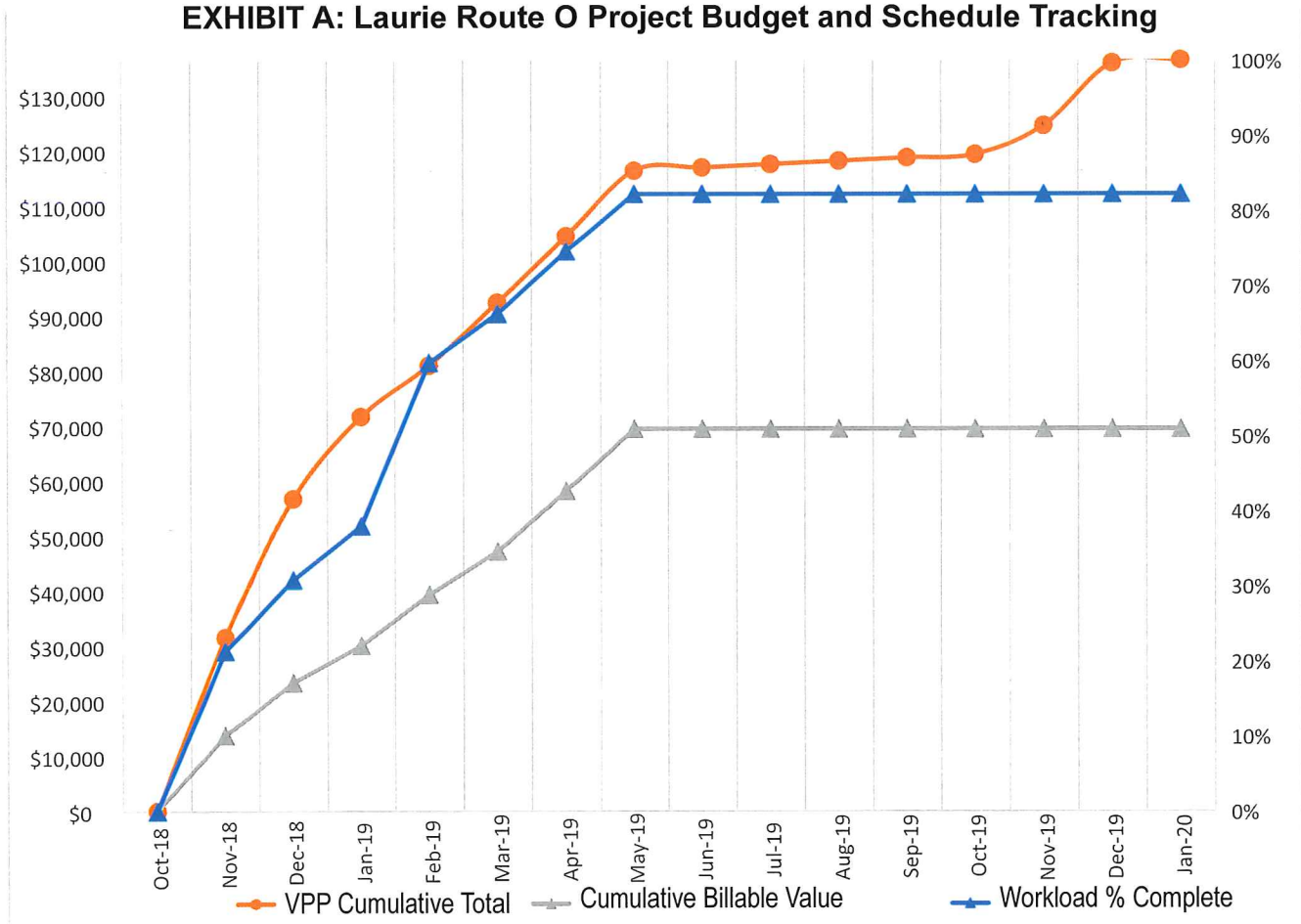
## SCHEDULE MANAGEMENT

Please see page 4 to view a draft of the schedule for this project and a description of our schedule management procedures.

## BUDGET MANAGEMENT

The City of Branson will have a clear picture of the project's schedule and budget because of the project management techniques used by project manager Gary Davis. As seen in Exhibit A, Gary uses the three-line graph on all of his projects above \$10,000 in fee.

**EXHIBIT A: Laurie Route O Project Budget and Schedule Tracking**





# PROJECT UNDERSTANDING AND APPROACH

Our team and our clients love this because it allows stakeholders to quickly see how the project is performing relative to schedule and budget. Trends can be seen as well, which allows the team to make changes to get back on schedule or budget. This year, we provided a three-line graph to the City of Laurie Board of Aldermen. Please contact Vanessa Hebrank, City Clerk, for a reference at (573) 374-4871.

## QUALITY CONTROL

We will provide field checks of all survey services prior to design. We will enlist subject matter experts within Bartlett & West, who weren't involved previously, to perform QA/QC

at the 30-60-90 milestones prior to submittal. We will involve construction experts to address project bidding/contracting and constructability review at 60-percent progress.

## INNOVATION

Our innovative approaches to project design and management are seen in the project examples included in this proposal. We save our clients money through innovation and minimize change orders through quality control. See the performance record below for a few examples of this success or, if you prefer, please call any of our references.

## PERFORMANCE RECORD

CLIENT	PROJECT	ENG. COSTS	CONST. COSTS	PROJECT SCHEDULE
Vernon County CPWSD No. 1	Distribution System Improvements	On Budget	12% Under Budget	On Time
Town of Carrollton	7th Street Water Line Replacement	On Budget	3% Under Budget	On Time
Sedalia Water Department	Water Treatment Plant Chemical Feed Changes	On Budget	N/A	Under Construction
Prairie Home	Wastewater Improvements	On Budget	7% Under Budget	On Time
City of Linn	Water System Improvements	Under Budget	3.2% Under Budget	On Time
City of California	Water System Improvements	On Budget	2.2% Under Budget	On Time
City of California	Well and Well House No. 9	On Budget	2.9% Under Budget	On Time
City of California	Water System Study	On Budget	N/A	On Time
City of LaBelle	Water System Improvements	On Budget	6% Under Budget	On Time
City of California	NW Sanitary Sewer	Under Budget	45% Under Budget	On Time
City of California	2016 Sanitary Sewer Upgrade	On Budget	19% Under Budget	On Time

# SCHEDULE

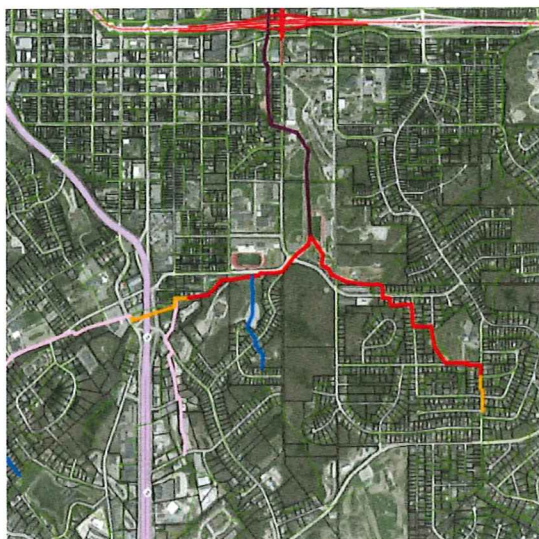
## OUR PROCESS OF CLIENT INTERACTION AND REPORTING INCLUDES:

- Project kickoff/concept meeting with Branson staff to ensure we are addressing all concerns before beginning the design.
- Provide conceptual and design submittal milestones for review.
- Provide a conceptual submittal to include proposed alignments with preliminary cost opinions for review with City staff prior to detailed design.
- Provide monthly progress reports, unless otherwise requested from City, submitted one week prior to board meetings.
- Preconstruction Kickoff Meeting: Review contract schedule with City prior to project advertisement, bidding and construction notice-to-proceed.
- Copy City engineering staff on all submittal/shop drawing reviews.
- Monthly progress meetings or conference calls to address construction issues and schedule.

### Signed Engineering Agreement







### PROJECT HIGHLIGHTS

- Modeling approximately one-fifth of citywide sewer system
- 4.6 miles of gravity sewer
- 2,300 feet of force main

### PROJECT NUMBERS

Project Completion: 2016

Engineer's Estimate: \$4.83 million

Bid: \$3.5 million

Final Construction Cost: Unknown

### CONTACT

Eric Seaman, PE  
Wastewater Division Director  
320 E. McCarty  
Jefferson City MO 65101  
(573) 634-6443  
eseaman@jeffcitymo.org

## SANITARY SEWER INTERCEPTOR AND FORCE MAIN

### Jefferson City, Missouri

The City of Jefferson had an opportunity to address aging sanitary sewer interceptors before they were impacted by MoDOT's Lafayette Interchange project along U.S. 50/63. There were two existing interceptors — a 15-inch VCP interceptor and 24-inch RCP interceptor — that were running under the overpass where the interchange was proposed.

The goal of the project was to meet construction timelines while eliminating flooding of basements within Basin 6 as well as sanitary sewer overflows (SSOs) in Basin 5. There were two additional basins (3 and 4) that needed to be evaluated that are served by the Green Meadow Pump Station (firm capacity of 1,800 gpm) since the pump station discharges to gravity sewer at the top of Basin 6. In addition, another pump station was being constructed that would nearly double the required capacity of the Green Meadow Pump Station, ultimately adding flow to the interceptors at Lafayette.

Bartlett & West used the Bentley SewerGEMS modeling program to evaluate the system. Flow meters and rain gauges were placed in eight locations in all basins within the study area to monitor total system flows and rainfall intensities. The model was constructed and parameters were used to simulate dry weather flow, groundwater inflow, and inflow and infiltration into the system due to a wet weather event. After the model was calibrated to the observed storm events, a number of storm simulations were conducted to evaluate the system alternatives.

The model provided the City with a method to accurately determine future system flows to select the most appropriate solution to their wastewater infrastructure needs. Bartlett & West's ability to complete the study of this large project in a short timeframe and meet required deadlines of the study allowed for completion of the design before the Lafayette projects impacted the two interceptors that served the study basins.



# SEWER INTERCEPTOR AND LIFT STATION REHABILITATION

Topeka, Kansas



## PROJECT HIGHLIGHTS

- Rehabilitation and upgrade
- Pumping capacity increased to 78 MGD
- Innovative design provided access to wet well for maintenance
- Influent 78-inch diameter interceptor was rehabilitated using the spiral wound process

## PROJECT NUMBERS

Project Completion: 2014  
Engineer's Estimate: \$7.3 million  
Bid: \$4.97 million  
Final Construction Cost: \$5.15 million

## CONTACT

Michelle Neiswender  
Project Engineer  
City of Topeka  
(785) 368-4251  
mneiswender@topeka.org

The South Kansas River Pump Station was constructed in the early 1970s; much of the electrical equipment was out of date for years when the City of Topeka asked Bartlett & West to help them rehabilitate the pump station and upgrade it up to modern standards.

The design included new dry-pit submersible pumps, new controls and VFDs, new dual five-foot wide mechanical bar screens, a new odor control system, new stainless steel pump intakes that meet Hydraulic Institute standards and discharge piping and valve replacements. The pumps were selected to meet a multitude of hydraulic conditions to match current and future flow configurations. The interior of the wet well received structural rehabilitation in some areas and an epoxy corrosion barrier over the entire interior surface. The existing wet well design made access to the interior of the wet well extremely dangerous while also requiring complete shutdown of the pump station.

Bartlett & West's design team developed a solution to divide the wet well into two parts and provide access from the bar screen area, allowing city staff to access the wet well safely and without taking the pump station out of service.

In addition to the pump station rehabilitation, the upstream interceptor and structures were also rehabilitated. The 78-inch diameter RCP interceptor was severely deteriorated and was renewed using the spiral wound process which allowed the pipe to be rehabilitated under active flow, the first time the process had been used in the City of Topeka.

The project required numerous structural modifications to accommodate the new equipment as well as HVAC and plumbing upgrades, utilizing the full gamut of Bartlett & West's multi-disciplined capabilities.





### PROJECT HIGHLIGHTS

- Gravity sewer and water line replacement
- 772 LF of 8-inch water main, 1,848 LF of 8-inch gravity sewer

### PROJECT NUMBERS

Project Completion: 2015

Engineer's Estimate: \$1.6 million

Bid: \$940,970

Final Construct. Cost: \$888,406

### CONTACT

Kyle Wirts

Utilities Superintendent

City of California

(573) 796-2268

k.wirts@cityofcalifornia.net

### PROJECT HIGHLIGHTS

- \$63,000 under bid amount
- Grant Funding
- 600,000-gallon, elevated tank
- 3,393 LF of 12-in. water line

### PROJECT NUMBERS

Project Completion: 2016

Engineer's Estimate: \$2.7 million

Bid: \$2.88 million

Final Construct. Cost: \$2.8 million



## SANITARY SEWER IMPROVEMENTS

California, Missouri

Bartlett & West partnered with the City of California to provide professional services for a long list of needed water system improvements, completing the job \$63,000 under the bid amount. The scope of professional services included surveying, design, permitting, bidding, funding assistance, construction administration and observation.

The project included improvements to four existing well houses, backflow device installation, large meter installations, construction of a new, 600,000-gallon, elevated water storage tank, repaint of an existing 1 million-gallon, elevated water storage tank, 3,393 linear feet of 12-inch PVC water line and the demolition of two old water towers. The project was funded with grants and low interest loans through the State Revolving Fund.

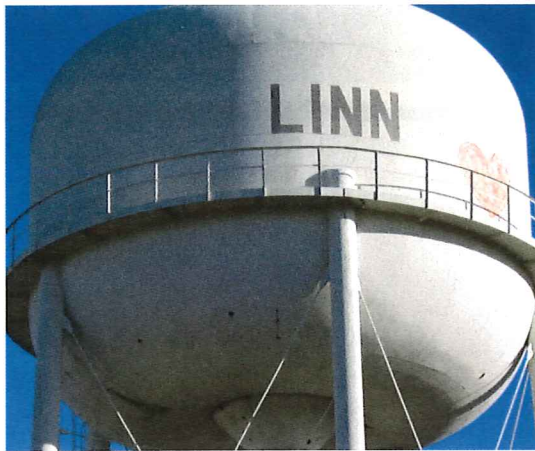
## WATER SYSTEM IMPROVEMENTS

California, Missouri

Bartlett & West partnered with the City of California to provide professional services for a long list of needed water system improvements, completing the job \$63,000 under the bid amount. The scope of professional services included surveying, design, permitting, bidding, funding assistance, construction administration and observation.

The project included improvements to four existing well houses, backflow device installation, large meter installations, construction of a new, 600,000-gallon, elevated water storage tank, repaint of an existing 1 million-gallon, elevated water storage tank, 3,393 linear feet of 12-inch PVC water line and the demolition of two old water towers. The project was funded with about \$1.4 million in grants and \$1.4 million in low interest loans through the State Revolving Fund.





# WATER SYSTEM IMPROVEMENTS AND MASTER PLAN

## Linn, Missouri

During the last decade, water demand in the City of Linn, Missouri, has risen as development continues to increase despite diminishment of the water supply. Two wells were closed because of iron bacteria contamination, and the City has approximately 650 meters with limited staff to maintain and operate. The City contracted with Bartlett & West to identify the existing and future needs, with an emphasis on operating and maintaining the system with minimal personnel demands.

In addition to inadequate water storage volume, the system offered no independent control of well pumping operations, no chlorine feed system and a lack of fire hydrants and flushing of dead-end lines. In terms of the water billing system, water loss determinations and meter readings were cumbersome and in need of automation.

A WaterCAD model was created for the water system to determine the location of a new elevated water storage tank and supply well. The City has 94 percent residential customers with the remaining customers being commercial and public-use facilities. The City has one manufacturing plant, a nursing home, two car washes, and fast food restaurants that have large service meters. The modeling helped determine the best locations for the storage tank and the piping needed to provide water to the existing distribution system and for fire flow.

Bartlett & West helped the City write a master plan to address the problems they were experiencing. The improvements reduced personnel demands and lowered operating and maintenance costs. Also, the master plan provided the City with justification to obtain state and federal grants to fund 50 percent of the project. The grant helped pay for a new supply well and well house, replacement of an existing well house and well pump, and added chlorination to all well houses. Also, all meters were changed out to radio read meters so now the City can read all of the meters in less than an hour. The meter data is automatically input into the billing software, thus reducing the personnel requirements for both operations by a third.

## PROJECT HIGHLIGHTS

- SCADA system to control well pumps and remote operation of the wells
- 200,000-gallon elevated storage tank
- Rehab of existing water storage tank
- Alarm system to contact operator in emergency

## PROJECT NUMBERS

Project Completion: 2014

Engineer's Estimate: \$3.51 million

Bid: \$2.82 million

Final Construction Cost: \$2.73 million

## CONTACT

Larry Fredrich  
Water Department Manager  
City of Linn, MO  
(573) 645-8208





# TANNER BRIDGE/ROUTE B PUMP STATION AND SANITARY SEWER EXTENSION

Jefferson City, Missouri

Although the Tanner Bridge/Route B Sanitary Sewer Extension project did not include many alignment alternatives, discussions with the Rickman Center and Land Investments, LLC were conducted to help set the layout early on.

## PROJECT HIGHLIGHTS

- 4,970 feet of 4-inch and 8-inch force main
- 2,690 feet of 8-inch to 18-inch gravity main
- In-house geotechnical expertise with a cost-effective sub-contractor

## PROJECT NUMBERS

Project Completion: 2014  
Engineer's Estimate: \$1.6 million  
Final Construction Cost: \$1.6 million

## CONTACT

David Bange, PE  
City of Jefferson  
320 East McCarty Street  
Jefferson City, MO 65101  
(573) 634-6433

Bartlett & West completed a thorough investigation of the future demand in the sewer shed using recent future land use maps from the planning department in order to determine the most appropriate design for the force main and pump station.

Between the initial flow from the Rickman Center and the future full build-out scenario, a four-inch and eight-inch force main combination in the same trench proved to allow for the most flexibility throughout the development of the sewer shed.

The project team worked closely with the Jefferson City Wastewater Division staff to determine specific needs at the pump station with regard to future growth, replacement of pumps for future larger flow demands and best design practices for reduced maintenance.

The final details of the pump station were a combination of Bartlett & West proven standards and unique Jefferson City pump station designs to arrive at a pump station that will serve Jefferson City for years of future development.

Bartlett & West included Twehous Excavating Company as a sub-contractor for rock test pits and bores to efficiently establish accurate quantities for rock excavation.

# YOUR TEAM



**STEVE SCHULTZ, PE**

Client Liaison

**GARY DAVIS, PE**

Project Manager

**CRAIG KERN, PE**

Project Engineer  
(Drinking Water), QA/QC

**KYLE LANDWEHR, EI**

Project Engineer

**DUSTIN KAISER, PLS**

Survey Manager

**GREG MEYER, PE**

Wastewater Pump Station &  
Collection System, QA/QC

**MIKE LORENZO, PE**

Force Main Expert,  
Technical Expert



## **GARY DAVIS, PE**

Gary joined Bartlett & West in 2011, and has worked on a variety of water and sanitary sewer projects. He provides basin modeling, hydraulic analysis for pumping and geotechnical engineering to the project team. Gary's field experience, combined with technical proficiency, brings practical solutions to the municipal clients he serves.

## **EDUCATION & REGISTRATION**

M.S., Civil Engineering, Missouri University of Science and Technology, 2008

B.S., Civil Engineering, Missouri University of Science and Technology, 2006

Professional Engineer – MO, WY, TX  
Land Surveyor in Training — MO

## **TECHNICAL SPECIALTIES**

Drinking water: supply, storage, distribution

Wastewater collection systems

Hydraulic modeling

Construction administration

Surveying

Project management



**STEVE SCHULTZ, PE**

Steve serves as a senior project manager, responsible for grant proposals, preliminary engineering studies and civil project design. Steve joined Bartlett & West in 2015, bringing more than 20 years of experience from conception to construction of water, wastewater, transportation and civil site projects.

**EDUCATION & REGISTRATION**

B.S., Civil Engineering, University of Missouri-Rolla, 1994

Professional Engineer – MO, IA, KS

**TECHNICAL SPECIALTIES**

Grant writing  
Project management  
Construction management  
Water and sewer system design  
Sewer collection  
Transportation system design

**MIKE LORENZO, PE**

Michael has been delivering solutions for his clients for more than 37 years. He joined Bartlett & West in 2014 and brings this vast experience to help clients achieve their visions of project success. He has experience in the management of peak wet weather collection system flows for areas ranging from small subdivisions to cities with hundreds of square miles.

**EDUCATION & REGISTRATION**

M.S., Environmental Engineering, Univ. of Massachusetts, 1981

Professional Engineer — MO, KS

NASSC certified: PACP, MACP, LACP

**TECHNICAL SPECIALTIES**

Wet weather peak flow management  
Combined sewer overflow planning and design  
Sewer system evaluation surveys, CCTV and GIS  
Collection systems eval., design

**GREG MEYER, PE**

As a Bartlett & West engineering manager, Greg regularly performs and provides technical support for the planning, design and construction administration for a variety of wastewater projects. His expertise includes the analysis and design of wastewater pump stations, pressure sewer systems, as well as collections system modeling, design and rehabilitation.

**EDUCATION & REGISTRATION**

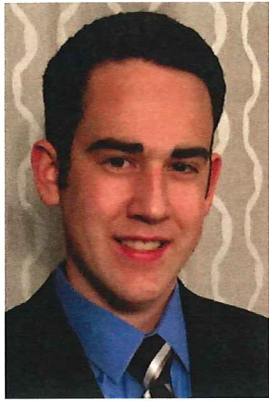
B.S., Civil Engineering, Kansas State University, 1999

Professional Engineer — KS

Land Surveyor in Training — MO

**TECHNICAL SPECIALTIES**

Hydrology, hydraulics  
Wastewater systems analysis, design  
Hydraulic modeling  
Pump station analysis, design

**KYLE LANDWEHR, PE**

Kyle joined Bartlett & West full time in December 2018 after interning for two summers and throughout his final year of college. He has a broad knowledge base in multiple areas, including water distribution systems, water and wastewater treatment, wastewater distribution systems, easement acquisition, permitting and project funding. Client communication is important to Kyle, and he is available whenever needed.

**EDUCATION & REGISTRATION**

B.S., Civil Engineering, Missouri University of Science & Technology, 2018

Engineer Intern — MO

**TECHNICAL SPECIALTIES**

Hydraulics  
Water treatment  
Wastewater treatment  
Easement acquisition

**CRAIG KERN, PE**

Craig brings a wealth of experience from pipeline, municipal water treatment and supply and recently as sole proprietor of a mining endeavor that included state and federal regulatory permitting compliance. During his time at the City Utilities of Springfield, he specialized in water treatment and supply design and project management, including chemical treatment applications and water treatment infrastructure.

**EDUCATION & REGISTRATION**

B.S, Mechanical Engineering, University of Missouri—Rolla, 2005

Professional Engineer—MO

Drinking Water Operator  
License—MO Class A

**TECHNICAL SPECIALTIES**

Water treatment  
Water supply  
Project management  
Design and bid procurement  
Construction management

**DUSTIN KAISER, PLS**

When Dustin joined Bartlett & West, he brought more than 20 years of experience in all aspects of surveying. He has experience with the Trimble S6 Robotic Total Station and MoDOT RTK Network. As a survey manager, he oversees the survey crews' field work and maintains the accurate precision of property boundary surveys, subdivision planning, topographical surveys and construction control.

**EDUCATION & REGISTRATION**

A.A.S., Drafting, Lincoln University, 1994

A.S., Building Construction, Lincoln University, 1994

Professional Land Surveyor—MO

**TECHNICAL SPECIALTIES**

Boundary survey  
Topographic survey  
Easement descriptions & exhibits  
Construction staking



## REFERENCES

1. Eric Seaman, PE  
Wastewater Division Director  
Jefferson City, Missouri  
(573) 634-6443  
eseaman@jeffcitymo.org
2. Michelle Neiswender  
Project Engineer  
Topeka, Kansas  
(785) 368-4251  
mneiswender@topeka.org
3. Kyle Wirts  
Utilities Superintendent  
California, Missouri  
(573) 796-2268  
k.wirts@cityofcalifornia.net
4. Larry Fredrich  
Water Department Manager  
Linn, Missouri  
(573) 645-8208
5. Tom Sanders  
Director of Public Works  
Moberly, Missouri  
(660) 269-7644  
tsanders@cityofmoberly.com
6. Will Humphrey  
General Manager  
PWSD No. 4 of Cole County  
Jefferson City, Missouri  
(573) 395-4865  
will@colepwsd4.com
7. Jan Wyatt  
City Clerk  
Russellville, Missouri  
(573) 782-3511  
russellville@embarqmail.com
8. Melinda Piper  
General Manager  
CPWSD No. 2 of Barton, Dade,  
Cedar and Jasper Counties  
Lamar, Missouri  
(417) 682-3401  
bdcjwater@sbcglobal.net
9. Vanessa Hebrank  
City Clerk  
Laurie, Missouri  
(573) 374-4871  
citylaurie@yahoo.com

